



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,720	08/25/2003	Joseph H. Lyons	1857.2030000	9846
28393	7590	08/03/2005	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVE., N.W. WASHINGTON, DC 20005			CYGAN, MICHAEL T	
			ART UNIT	PAPER NUMBER
			2855	
DATE MAILED: 08/03/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/646,720

Applicant(s)

LYONS, JOSEPH H.

Examiner

Michael Cygan

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barada (US 4,953,388) in view of Carraras (US 4,604,892). Barada teaches an air gauge sensor comprising dividing portion [32], reference channel [42], measurement channel [40], flow restrictors [44,46] in both channels, mass flow sensor [50] coupled to both channels and to a controller (Figure 2), and a mass flow controller [20] coupled to a filter [30] acting as a snubber; see entire document, especially Figure 1. Barada teaches the method for proximity sensing with the abovedescribed apparatus; see abstract and column 3. Barada teaches the claimed invention except for an elongated orifice, particularly having the claimed dimensions. With respect to the "such that...low sensitivity areas", the specification reveals this advantage to flow from either the matching of the orifice footprint to the surface features (paragraph 0048), or to the elongated dimensions of the nozzles (paragraph 0023).

Carreras teaches the use of a rectangular orifice having a shape homothetic of that of the deposit to be measured; see Figure 4 lines 6-9 and Figures 1 and 5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a rectangular orifice as taught by Carreras in the invention taught by Barada to form the orifices, since Carreras teaches that this "essential feature" allows the equivalent of a volume to be measured; see column 4 lines 6-9.

With respect to the ranges of dimension claimed, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

2. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barada (US 4,953,388) in view of Zumbach (US 3,948,082). Barada teaches an air gauge sensor comprising dividing portion [32], reference channel [42], measurement channel [40], flow restrictors [44,46] in both channels, mass flow sensor [50] coupled to both channels and to a controller (Figure 2), and a mass flow controller [20] coupled to a filter [30] acting as a snubber; see entire document, especially Figure 1. Barada teaches the method for proximity sensing with the abovedescribed apparatus; see abstract and column 3. Barada teaches the claimed invention except for an elongated

orifice, particularly having the claimed dimensions. With respect to the “such that...low sensitivity areas”, the specification reveals this advantage to flow from either the matching of the orifice footprint to the surface features (paragraph 0048), or to the elongated dimensions of the nozzles (paragraph 0023).

Zumbach teaches the use of a longitudinal sensing slit [34] for measuring air gaps; see column 8 and Figure 4. It have been obvious to one having ordinary skill in the art at the time the invention was made to use a rectangular orifice as taught by Zumbach in the invention taught by Barada to form the orifices, since Zumbach teaches that this eliminates the need for exact lateral guidance, since the air gap is in the form of a homogeneous field; see column 8 lines 60+.

With respect to the ranges of dimension claimed, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Response to Arguments***


Applicant's arguments filed 28 February 2005 have been fully considered but are moot in view of the cancellation of the previously rejected claims and in view of the new grounds of rejections.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MICHAEL CYGAN, Ph.D.  
PRIMARY EXAMINER